

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) An image photographing apparatus for photographing a still image, comprising:
 - a scanning imaging device for generating image signals;
 - a frequency dividing means for generating and outputting a normal vertical clock for reading out the image signals and a high speed clock having a higher frequency than that of the normal vertical clock;
 - control means for using the image signals generated by said imaging device to adjust the still image during at least one control period before photographing,
 - said control means defining a single detection area which is both vertically and horizontally limited within said imaging device and reading only the image signals within the single detection area out of said imaging device,
 - the read image signals being used to adjust the still image before photographing;
 - a control period of said control means being set in correspondence within a read-out period associated with of said single detection area; and
 - a pulse counter circuit for receiving instructions from said control means indicating a quantity of rows that are not to be read out and are read using a high speed clock and setting a value in response to the quantity of rows that are not to be read out,

wherein when the quantity of rows that are not to be read out equals a predetermined value of counted rows, output signals are generated to control a switching unit which switches from the high speed clock to a normal vertical clock,

wherein a high frequency component of the image signal associated with the single detection area is used for automatic focus control and a luminance signal associated with the single detection area is used for an automatic photographic sensitivity control and a chrominance signal associated with the single detection area is used for an automatic white balance control,

wherein only image signals of the single detection area are read out and used for controlling the scanning image device and processing of the image signals so that the control period is shortened than that of using entire image signals,

wherein the single detection area is located at a central area of an effective pixel plane and includes only consecutive horizontal lines, and

wherein the normal vertical clock corresponds to a read out period where horizontal lines corresponding to the detection area are read out.

2. (Previously Presented) The image photographing apparatus according to Claim 1, wherein the control means also controls the imaging device when the still image is being photographed.

3. (Previously Presented) The image photographing apparatus according to Claim 1, wherein the control means determines a start position of the single detection area and

the amount of image signals to be read out within the single detection area, and, accordingly, only the image signals within the single detection area are read out of the imaging device.

4. (Previously Presented) The image photographing apparatus according to Claim 3, wherein the control means allows a high-speed scan in a region before the start position of the single detection area, allows a predetermined-speed scan in the single detection area, and allows only the determined amount of image signals to be read out.

5. (Previously Presented) The image photographing apparatus according to Claim 1, wherein, based on the read image signals, at least one of automatic focus control, automatic photographic sensitivity control, and automatic white balance control is performed.

6. (Currently Amended) An image photographing method for photographing

a still image by a scanning imaging device for generating image signals, comprising the steps of:

when the image signals generated by the imaging device are used to adjust the still image before photographing:

generating and outputting a normal vertical clock for reading out the image signals and a high speed clock having a higher frequency than that of the normal vertical clock; defining a single detection area which is both vertically and horizontally limited within the imaging device;

reading only the image signals within the single detection area out of the imaging device;

adjusting during at least one control period, by using the read image signals within the single detection area, the still image before photographing;
establishing a control period as a function of a read-out period associated with the single detection area; and

receiving instructions indicating a quantity of rows that are not to be read out and read using a high speed clock and setting a value in response to the quantity of rows that are not to be read out,

wherein when the quantity of rows equals a predetermined value of counted rows, output signals are generated to switch from the high speed clock to a normal vertical clock,

wherein a high frequency component of the image signal associated with the single detection area is used for automatic focus control and a luminance signal associated with the single detection area is used for an automatic photographic sensitivity control and a chrominance signal associated with the single detection area is used for an automatic white balance control,

wherein only image signals of the single detection area are read out and used for controlling the image device and processing of the image signals so that the control period is shortened than that of using entire image signals.

wherein the single detection area is located at a central area of an effective pixel plane and includes only consecutive horizontal lines, and

wherein the normal vertical clock corresponds to a read out period where horizontal lines corresponding to the detection area are read out.

7. (Previously Presented) The image photographing method according to Claim 6, wherein a control means controls the imaging device when the still image is being photographed.

8. (Previously Presented) The image photographing method according to Claim 6, wherein the reading step includes the step of determining a start position of the single detection area and the amount of image signals to be read out within the single detection area, so that only the image signals within the single detection area are read out of the imaging device.

9. (Previously Presented) The image photographing method according to Claim 8, further comprising the step of:

performing a high-speed scan in a region before the start position of the single detection area, performing a predetermined-speed scan in the single detection area, and reading out only the determined amount of image signals.

10. (Previously Presented) The image photographing method according to Claim 6, wherein, based on the read image signals, at least one of automatic focus control, automatic photographic sensitivity control, and automatic white balance control are performed.

11. (Currently Amended) An image photographing apparatus for photographing a still image, comprising:

a scanning imaging device for generating image signals;

a frequency dividing means for generating and outputting a normal vertical clock for reading out the image signals and a high speed clock having a higher frequency than that of the normal vertical clock;

control means for using the image signals generated by the imaging device to adjust the still image during at least one control period before photographing, the control means defining a single detection area within the imaging device and reading only the image signals within the single detection area out of the imaging device, the read image signals being used to adjust the still image before photographing;

wherein the control means controls at least two scan speeds with a first scan speed being used outside the single detection area and a second scan speed being used within the single detection area, the first scan speed being greater than the second scan speed; and

a pulse counter circuit for receiving instructions from the control means indicating a quantity of rows that are not to be read out and are read at the first scan speed and setting a value in response to the quantity of rows that are not to be read out,

wherein when the quantity of rows equals a predetermined value of counted rows, output signals are generated to control a switching unit which switches from the first scan speed to the second scan speed,

wherein a high frequency component of the image signal associated with the single detection area is used for automatic focus control and a luminance signal associated with the single detection area is used for an automatic photographic sensitivity control and a chrominance signal associated with the single detection area is used for an automatic white balance control,

wherein only image signals of the single detection area are read out and used for controlling the scanning image device and processing of the image signals so that the control period is shortened than that of using entire image signals,

wherein the single detection area is located at a central area of an effective pixel plane and includes only consecutive horizontal lines, and

wherein the normal vertical clock corresponds to a read out period where horizontal lines corresponding to the detection area are read out.

12. (Previously Presented) The image photographing apparatus according to Claim 11, wherein said control means controls said imaging device when the still image is being photographed.

13. (Previously Presented) The image photographing apparatus according to Claim 11, wherein the control means determines a start position of the single detection area and the amount of image signals to be read out within the single detection area, and only the image signals within the single detection area are read out of the imaging device.

14. (Previously Presented) The image photographing apparatus according to Claim 13, wherein the control means allows a high-speed scan in a region before the start position of the single detection area, allows a predetermined-speed scan in the single detection area, and allows only the determined amount of image signals to be read out.

15. (Previously Presented) The image photographing apparatus according to Claim 11, wherein, based on the read image signals, at least one of automatic focus control, automatic photographic sensitivity control, and automatic white balance control is performed.

16. (Currently Amended) An image photographing method for photographing a still image by a scanning imaging device for generating image signals, comprising the steps of:
when the image signals generated by the imaging device are used to adjust the still image before photographing:

generating and outputting a normal vertical clock for reading out the image signals and a high speed clock having a higher frequency than that of the normal vertical clock;
defining, by control means, a single detection area within the imaging device;
reading, by the control means, only the image signals within the single detection area out of the imaging device;
adjusting during at least one control period, by using the read image signals within the single detection area, the still image before photographing; and
controlling at least two scan speeds with a first scan speed being used outside the single detection area and a second scan speed being used within the single detection area, the first scan speed being greater than the second scan speed; and
receiving instructions indicating a quantity of rows that are not to be read out and are read at said first scan speed and setting a value in response to the quantity of rows that are not to be read out,

wherein when the quantity of rows equals a predetermined value of counted rows, output signals are generated to switch from the first scan speed to the second scan speed,

wherein a high frequency component of the image signal associated with the single detection area is used for automatic focus control and a luminance signal associated with the single detection area is used for an automatic photographic sensitivity control and a chrominance signal associated with the single detection area is used for an automatic white balance control,

wherein only image signals of the single detection area are read out and used for controlling the scanning image device and processing of the image signals so that the control period is shortened than that of using entire image signals,

wherein the single detection area is located at a central area of an effective pixel plane and includes only consecutive horizontal lines, and

wherein the normal vertical clock corresponds to a read out period where horizontal lines corresponding to the detection area are read out.

17. (Previously Presented) The image photographing method according to Claim 16, wherein the control means also controls the imaging device when the still image is being photographed.

18. (Previously Presented) The image photographing method according to Claim 16, wherein the reading step includes a step of allowing the control means to determine a start position of the single detection area and the amount of image signals to be read out within

the single detection area, so that only the image signals within the single detection area are read out of the imaging device accordingly.

19. (Previously Presented) The image photographing method according to Claim 18, further comprising the step of:

allowing the control means to perform a high-speed scan in a region before the start position of the single detection area, to perform a predetermined-speed scan in the single detection area, and to read out only the determined amount of image signals.

20. (Previously Presented) The image photographing method according to Claim 16, wherein, based on the read image signals, at least one of automatic focus control, automatic photographic sensitivity control, and automatic white balance control are performed.